CLAIMS

1. Compensating circuitry for substituting for erased periodic signal data periodic signal data input before the erased periodic signal data, comprising:

a past data saving circuit configured to save a predetermined number of latest periodic signal data input;

a decision circuit configured to determine whether or not an erasure occurs with every periodic signal data sequence, which is a unit of processing;

a substituting circuit configured to use, when an erasure occurs, a periodic signal data sequence lying in a predetermined segment to be used among periodic signal data sequences saved in said past data saving circuit, to generate synthetic data for substitution; and

a position controller configured to determine, when the erasure has occurred over a plurality of units of processing, a position of the segment to be used such that the position varies for each of the units of processing.

2. The circuitry in accordance with claim 1, wherein said position controller calculates periods of the periodic signal data sequences saved in said past data saving circuit and selects, among the periods calculated, a waveform period having highest periodicity as a width of the segment to be used.

3. The circuitry in accordance with claim 1, said position control circuit calculates periods of the periodic signal data sequences saved in said past data saving circuit and selects, among the periods calculated, a period shorter than a width of the segment to be used as an index for varying the segment for every processing frame.

4. The circuitry in accordance with claim 1, wherein

said position controller sequentially shifts the position of the segment to be used from a newest periodic signal data sequence toward an oldest periodic signal data sequence saved in said past data saving circuit and determines, when the segment cannot be further shifted toward the oldest period signal data sequence, the segment at a position adjacent to the oldest periodic signal data sequence.

5. The circuitry in accordance with claim 1, wherein said position controller sequentially shifts the position of the segment to be used from a newest periodic signal data sequence toward an oldest periodic signal data sequence saved in said past data saving circuit, again sequentially shifts, when the segment cannot be further shifted toward the oldest period signal data sequence, the segment from the newest periodic signal data sequence toward the oldest period signal data sequence, and repeats a variation effected by a shift so long as the erasure continues.

6. The circuitry in accordance with claim 1, wherein said position controller sequentially shifts the position of the segment to be used from a newest periodic signal data sequence toward an oldest periodic signal data sequence saved in said past data saving circuit, sequentially shifts, when the segment cannot be further shifted toward the oldest period signal data sequence, the segment from the oldest periodic signal data sequence toward the newest period signal data sequence, sequentially shifts, when the segment cannot be further shifted toward the newest periodic signal data sequence, the segment from the newest periodic signal data sequence toward the oldest periodic signal data sequence, and repeats a variation effected by a shift so long as the erasure continues.

7. The circuitry in accordance with claim 1, wherein the periodic signal comprises a speech signal.

8. A compensating method for substituting for erased periodic signal data periodic signal data input before the erased periodic signal data, comprising:

a past data saving step of saving a predetermined number of latest periodic signal data input;

a deciding step of determining whether or not erasure occurs with every periodic signal data sequence, which is a unit of processing;

a substituting step of using, when an erasure occurs, among periodic signal data sequences saved in said past data saving step, a periodic signal data sequence lying in a predetermined segment to be used to generate data for substitution; and

a position controlling step of determining, when the erasure has occurred over a plurality of units of processing, a position of the segment to be used such that the position varies for each of the units of processing.

9. The method in accordance with claim 8, wherein said position controlling step calculates periods of the periodic signal data sequences saved in said past data saving step and selects, among the periods calculated, a waveform period having highest periodicity as a width of the segment to be used.

10. The method in accordance with claim 8, said position controlling step calculates periods of the periodic signal data sequences saved in said past data saving step and selects, among the periods calculated, a period shorter than a width of the segment to be used as an index for varying the segment for every processing frame.

11. The method in accordance with claim 8, wherein said position controller sequentially shifts the position of the segment to be used from a newest periodic signal data sequence toward an oldest periodic signal data sequence saved in said past data saving step and determines, when the segment cannot be further shifted toward the oldest period signal data sequence, the segment at a position adjacent to the oldest periodic signal data sequence.

12. The method in accordance with claim 8, wherein said position controlling step sequentially shifts the position of the segment to be used from a newest periodic signal data sequence toward an oldest periodic signal data sequence saved in said past data saving step, again sequentially shifts, when the segment cannot be further shifted toward the oldest period signal data sequence, the segment from the newest periodic signal data sequence toward the oldest period signal data sequence, and repeats a variation effected by a shift so long as the erasure continues.

13. The method in accordance with claim 8, wherein said position controlling step sequentially shifts the position of the segment to be used from a newest periodic signal data sequence toward an oldest periodic signal data sequence saved in said past data saving step, sequentially shifts, when the segment cannot be further shifted toward the oldest period signal data sequence, the segment from the oldest periodic signal data sequence toward the newest period signal data sequence, sequentially shifts, when the segment cannot be further shifted toward the newest periodic signal data sequence, the segment from the newest periodic signal data sequence toward the oldest periodic signal data sequence, and repeats a variation effected by a shift so long as erasure continues.

14. The method in accordance with claim 8, wherein the periodic signal comprises a speech signal.